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SEQUENCE LISTING

<110> Axxima Pharmaceuticals AG
Schubart, Daniel
5 Habenberger, Peter
Stein-Gerlach, Matthias
Bevec, Dorian

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				Leu Ser Ser	
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				Thr Pro Ser	
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      ctgcgaggca cactggctca cccagtcctg cccgccaccg ttatcgggtg cattcacctt 1920
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```

```

15     <210> 20
      <211> 636
      <212> PRT
      <213> Homo sapiens

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20     <400> 20

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```

      Met Ser Lys Pro Pro Ala Pro Asn Pro Thr Pro Pro Arg Asn Leu Asp
      1              5              10              15

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```

25     Ser Arg Thr Phe Ile Thr Ile Gly Asp Arg Asn Phe Glu Val Glu Ala
           20              25              30

```

```

30     Asp Asp Leu Val Thr Ile Ser Glu Leu Gly Arg Gly Ala Tyr Gly Val
           35              40              45

```

```

35     Val Glu Lys Val Arg His Ala Gln Ser Gly Thr Ile Met Ala Val Lys
           50              55              60

```

```

      Arg Ile Arg Ala Thr Val Asn Ser Gln Glu Gln Lys Arg Leu Leu Met
      65              70              75              80

```

```

40

```

```

      Asp Leu Asp Ile Asn Met Arg Thr Val Asp Cys Phe Tyr Thr Val Thr
           85              90              95

```

```

45

```

```

      Phe Tyr Gly Ala Leu Phe Arg Glu Gly Asp Val Trp Ile Cys Met Glu
           100             105             110

```

```

50     Leu Met Asp Thr Ser Leu Asp Lys Phe Tyr Arg Lys Val Leu Asp Lys
           115             120             125

```

```

55     Asn Met Thr Ile Pro Glu Asp Ile Leu Gly Glu Ile Ala Val Ser Ile
           130             135             140

```

```

      Val Arg Ala Leu Glu His Leu His Ser Lys Leu Ser Val Ile His Arg
      145             150             155             160

```

```

60

```

Asp Val Lys Pro Ser Asn Val Leu Ile Asn Lys Glu Gly His Val Lys
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5 Met Cys Asp Phe Gly Ile Ser Gly Tyr Leu Val Asp Ser Val Ala Lys
 180 185 190

10 Thr Met Asp Ala Gly Cys Lys Pro Tyr Met Ala Pro Glu Arg Ile Asn
 195 200 205

15 Pro Glu Leu Asn Gln Lys Gly Tyr Asn Val Lys Ser Asp Val Trp Ser
 210 215 220

20 Leu Gly Ile Thr Met Ile Glu Met Ala Ile Leu Arg Phe Pro Tyr Glu
 225 230 235 240

Ser Trp Gly Thr Pro Phe Gln Gln Leu Lys Gln Val Val Glu Glu Pro
 245 250 255

25 Ser Pro Gln Leu Pro Ala Asp Arg Phe Ser Pro Glu Phe Val Asp Phe
 260 265 270

30 Thr Ala Gln Cys Leu Arg Lys Asn Pro Ala Glu Arg Met Ser Tyr Leu
 275 280 285

35 Glu Leu Met Glu His Pro Phe Phe Thr Leu His Lys Thr Lys Lys Thr
 290 295 300

40 Asp Ile Ala Ala Phe Val Lys Lys Ile Leu Gly Glu Asp Ser Met Ser
 305 310 315 320

Lys Pro Pro Ala Pro Asn Pro Thr Pro Pro Arg Asn Leu Asp Ser Arg
 325 330 335

45 Thr Phe Ile Thr Ile Gly Asp Arg Asn Phe Glu Val Glu Ala Asp Asp
 340 345 350

50 Leu Val Thr Ile Ser Glu Leu Gly Arg Gly Ala Tyr Gly Val Val Glu
 355 360 365

55 Lys Val Arg His Ala Gln Ser Gly Thr Ile Met Ala Val Lys Arg Ile
 370 375 380

60 Arg Ala Thr Val Asn Ser Gln Glu Gln Lys Arg Leu Leu Met Asp Leu
 385 390 395 400

Asp Ile Asn Met Arg Thr Val Asp Cys Phe Tyr Thr Val Thr Phe Tyr
 405 410 415
 5
 Gly Ala Leu Phe Arg Glu Gly Asp Val Trp Ile Cys Met Glu Leu Met
 420 425 430
 10
 Asp Thr Ser Leu Asp Lys Phe Tyr Arg Lys Val Leu Asp Lys Asn Met
 435 440 445
 15
 Thr Ile Pro Glu Asp Ile Leu Gly Glu Ile Ala Val Ser Ile Val Arg
 450 455 460
 Ala Leu Glu His Leu His Ser Lys Leu Ser Val Ile His Arg Asp Val
 465 470 475 480
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 Lys Pro Ser Asn Val Leu Ile Asn Lys Glu Gly His Val Lys Met Cys
 485 490 495
 25
 Asp Phe Gly Ile Ser Gly Tyr Leu Val Asp Ser Val Ala Lys Thr Met
 500 505 510
 30
 Asp Ala Gly Cys Lys Pro Tyr Met Ala Pro Glu Arg Ile Asn Pro Glu
 515 520 525
 35
 Leu Asn Gln Lys Gly Tyr Asn Val Lys Ser Asp Val Trp Ser Leu Gly
 530 535 540
 40
 Ile Thr Met Ile Glu Met Ala Ile Leu Arg Phe Pro Tyr Glu Ser Trp
 545 550 555 560
 Gly Thr Pro Phe Gln Gln Leu Lys Gln Val Val Glu Glu Pro Ser Pro
 565 570 575
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 Gln Leu Pro Ala Asp Arg Phe Ser Pro Glu Phe Val Asp Phe Thr Ala
 580 585 590
 50
 Gln Cys Leu Arg Lys Asn Pro Ala Glu Arg Met Ser Tyr Leu Glu Leu
 595 600 605
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 Met Glu His Pro Phe Phe Thr Leu His Lys Thr Lys Lys Thr Asp Ile
 610 615 620
 Ala Ala Phe Val Lys Lys Ile Leu Gly Glu Asp Ser
 625 630 635
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<211> 3745
<212> DNA
5 <213> Homo sapiens

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ggcaggcaat cttggttgtg aatattttct gatttttcca gaaatcaagc agaagattga 180
gctgctgatg tcagttaact ctgagaagtc gtcctcttca gaaaggccgg agcctcaaca 240
15 gaaagctcct ttagttcctc ctccctccacc gccaccacca ccaccaccgc cacctttgcc 300
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20 ggaccctgcg gactactgca aaggtggata tcatccagtg aaaattggag acctcttcaa 420
tggccggtat catgttatta gaaagcttgg atgggggcac ttctctactg tctggctgtg 480
ctgggatatg caggggaaaa gatttgttgc aatgaaagtt gtaaaaagtg cccagcatta 540
25 tacggagaca gccttggatg aaataaaatt gctcaaattg gttcgagaaa gtgatccag 600
tgacccaaac aaagacatgg tgggtccagct cattgacgac ttcaagattt caggcatgaa 660
30 tgggatacat gtctgcatgg tcttcgaagt acttggccac catctcctca agtggatcat 720
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tcaagggtta gattacttac acagtaagtg caagatcatt catactgaca taaagccgga 840
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gcagaaagca ggtgctcctc ctcccttcagg gtctgcagtg agtacggctc cacagcagaa 960
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aaatggacga cataaaattc ccgagtcaca gttcccagag tttccacct cgttggttctc 1560
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```

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	tcccatttgt gattttgcat atttttaaaa gtacttttaa agaagagcaa tttcccttta	3060
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```

15 <210> 22
    <211> 1372
    <212> PRT
    <213> Homo sapiens

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20 <400> 22

```

```

Met Ser Val Asn Ser Glu Lys Ser Ser Ser Ser Glu Arg Pro Glu Pro
1          5          10          15

```

```

25 Gln Gln Lys Ala Pro Leu Val Pro Pro Pro Pro Pro Pro Pro Pro Pro
    20          25          30

```

```

30 Pro Pro Pro Pro Leu Pro Asp Pro Thr Pro Pro Glu Pro Glu Glu Glu
    35          40          45

```

```

35 Ile Leu Gly Ser Asp Asp Glu Glu Gln Glu Asp Pro Ala Asp Tyr Cys
    50          55          60

```

```

Lys Gly Gly Tyr His Pro Val Lys Ile Gly Asp Leu Phe Asn Gly Arg
65          70          75          80

```

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40

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```

Tyr His Val Ile Arg Lys Leu Gly Trp Gly His Phe Ser Thr Val Trp
    85          90          95

```

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45

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```

Leu Cys Trp Asp Met Gln Gly Lys Arg Phe Val Ala Met Lys Val Val
    100          105          110

```

```

50 Lys Ser Ala Gln His Tyr Thr Glu Thr Ala Leu Asp Glu Ile Lys Leu
    115          120          125

```

```

55 Leu Lys Cys Val Arg Glu Ser Asp Pro Ser Asp Pro Asn Lys Asp Met
    130          135          140

```

```

Val Val Gln Leu Ile Asp Asp Phe Lys Ile Ser Gly Met Asn Gly Ile
145          150          155          160

```

```

60

```

His Val Cys Met Val Phe Glu Val Leu Gly His His Leu Leu Lys Trp
 165 170 175

5
 Ile Ile Lys Ser Asn Tyr Gln Gly Leu Pro Val Arg Cys Val Lys Ser
 180 185 190

10
 Ile Ile Arg Gln Val Leu Gln Gly Leu Asp Tyr Leu His Ser Lys Cys
 195 200 205

15
 Lys Ile Ile His Thr Asp Ile Lys Pro Glu Asn Ile Leu Met Cys Val
 210 215 220

20
 Asp Asp Ala Tyr Val Arg Arg Met Ala Ala Glu Pro Glu Trp Gln Lys
 225 230 235 240

Ala Gly Ala Pro Pro Pro Ser Gly Ser Ala Val Ser Thr Ala Pro Gln
 245 250 255

25
 Gln Lys Pro Ile Gly Lys Ile Ser Lys Asn Lys Lys Lys Lys Leu Lys
 260 265 270

30
 Lys Lys Gln Lys Arg Gln Ala Glu Leu Leu Glu Lys Arg Leu Gln Glu
 275 280 285

35
 Ile Glu Glu Leu Glu Arg Glu Ala Glu Arg Lys Ile Ile Glu Glu Asn
 290 295 300

40
 Ile Thr Ser Ala Ala Pro Ser Asn Asp Gln Asp Gly Glu Tyr Cys Pro
 305 310 315 320

Glu Val Lys Leu Lys Thr Thr Gly Leu Glu Glu Ala Ala Glu Ala Glu
 325 330 335

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 Thr Ala Lys Asp Asn Gly Glu Ala Glu Asp Gln Glu Glu Lys Glu Asp
 340 345 350

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 Ala Glu Lys Glu Asn Ile Glu Lys Asp Glu Asp Asp Val Asp Gln Glu
 355 360 365

55
 Leu Ala Asn Ile Asp Pro Thr Trp Ile Glu Ser Pro Lys Thr Asn Gly
 370 375 380

60
 His Ile Glu Asn Gly Pro Phe Ser Leu Glu Gln Gln Leu Asp Asp Glu
 385 390 395 400

Asp Asp Asp Glu Glu Asp Cys Pro Asn Pro Glu Glu Tyr Asn Leu Asp
 405 410 415
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 Glu Pro Asn Ala Glu Ser Asp Tyr Thr Tyr Ser Ser Ser Tyr Glu Gln
 420 425 430
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 Phe Asn Gly Glu Leu Pro Asn Gly Arg His Lys Ile Pro Glu Ser Gln
 435 440 445
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 Phe Pro Glu Phe Ser Thr Ser Leu Phe Ser Gly Ser Leu Glu Pro Val
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 Ala Cys Gly Ser Val Leu Ser Glu Gly Ser Pro Leu Thr Glu Gln Glu
 465 470 475 480
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 Glu Ser Ser Pro Ser His Asp Arg Ser Arg Thr Val Ser Ala Ser Ser
 485 490 495
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 Thr Gly Asp Leu Pro Lys Ala Lys Thr Arg Ala Ala Asp Leu Leu Val
 500 505 510
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 515 520 525
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 530 535 540
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 545 550 555 560
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 Ser Thr Pro Ala Asp Ile Trp Ser Thr Ala Cys Met Ala Phe Glu Leu
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 Ala Thr Gly Asp Tyr Leu Phe Glu Pro His Ser Gly Glu Asp Tyr Ser
 580 585 590
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 Arg Asp Glu Asp His Ile Ala His Ile Ile Glu Leu Leu Gly Ser Ile
 595 600 605
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 Pro Arg His Phe Ala Leu Ser Gly Lys Tyr Ser Arg Glu Phe Phe Asn
 610 615 620
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 Arg Arg Gly Glu Leu Arg His Ile Thr Lys Leu Lys Pro Trp Ser Leu
 625 630 635 640

Phe Asp Val Leu Val Glu Lys Tyr Gly Trp Pro His Glu Asp Ala Ala
 645 650 655
 5
 Gln Phe Thr Asp Phe Leu Ile Pro Met Leu Glu Met Val Pro Glu Lys
 660 665 670
 10
 Arg Ala Ser Ala Gly Glu Cys Arg His Pro Trp Leu Asn Ser Met Ser
 675 680 685
 15
 Val Asn Ser Glu Lys Ser Ser Ser Ser Glu Arg Pro Glu Pro Gln Gln
 690 695 700
 Lys Ala Pro Leu Val Pro Pro Pro Pro Pro Pro Pro Pro Pro Pro Pro
 705 710 715 720
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 Pro Pro Leu Pro Asp Pro Thr Pro Pro Glu Pro Glu Glu Glu Ile Leu
 725 730 735
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 Gly Ser Asp Asp Glu Glu Gln Glu Asp Pro Ala Asp Tyr Cys Lys Gly
 740 745 750
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 Gly Tyr His Pro Val Lys Ile Gly Asp Leu Phe Asn Gly Arg Tyr His
 755 760 765
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 Val Ile Arg Lys Leu Gly Trp Gly His Phe Ser Thr Val Trp Leu Cys
 770 775 780
 Trp Asp Met Gln Gly Lys Arg Phe Val Ala Met Lys Val Val Lys Ser
 785 790 795 800
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 Ala Gln His Tyr Thr Glu Thr Ala Leu Asp Glu Ile Lys Leu Leu Lys
 805 810 815
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 Cys Val Arg Glu Ser Asp Pro Ser Asp Pro Asn Lys Asp Met Val Val
 820 825 830
 50
 Gln Leu Ile Asp Asp Phe Lys Ile Ser Gly Met Asn Gly Ile His Val
 835 840 845
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 Cys Met Val Phe Glu Val Leu Gly His His Leu Leu Lys Trp Ile Ile
 850 855 860
 Lys Ser Asn Tyr Gln Gly Leu Pro Val Arg Cys Val Lys Ser Ile Ile
 865 870 875 880
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Arg Gln Val Leu Gln Gly Leu Asp Tyr Leu His Ser Lys Cys Lys Ile
 885 890 895
 5
 Ile His Thr Asp Ile Lys Pro Glu Asn Ile Leu Met Cys Val Asp Asp
 900 905 910
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 Ala Tyr Val Arg Arg Met Ala Ala Glu Pro Glu Trp Gln Lys Ala Gly
 915 920 925
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 Ala Pro Pro Pro Ser Gly Ser Ala Val Ser Thr Ala Pro Gln Gln Lys
 930 935 940
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 Pro Ile Gly Lys Ile Ser Lys Asn Lys Lys Lys Lys Leu Lys Lys Lys
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 Gln Lys Arg Gln Ala Glu Leu Leu Glu Lys Arg Leu Gln Glu Ile Glu
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 Ser Ala Ala Pro Ser Asn Asp Gln Asp Gly Glu Tyr Cys Pro Glu Val
 995 1000 1005
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 Lys Leu Lys Thr Thr Gly Leu Glu Glu Ala Ala Glu Ala Glu Thr
 1010 1015 1020
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 Glu Leu Ala Asn Ile Asp Pro Thr Trp Ile Glu Ser Pro Lys Thr
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 Asp Asp Glu Asp Asp Asp Glu Glu Asp Cys Pro Asn Pro Glu Glu
 1085 1090 1095
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 Tyr Asn Leu Asp Glu Pro Asn Ala Glu Ser Asp Tyr Thr Tyr Ser
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Ser Ser Tyr Glu Gln Phe Asn Gly Glu Leu Pro Asn Gly Arg His
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 Lys Ile Pro Glu Ser Gln Phe Pro Glu Phe Ser Thr Ser Leu Phe
 1130 1135 1140
 10 Ser Gly Ser Leu Glu Pro Val Ala Cys Gly Ser Val Leu Ser Glu
 1145 1150 1155
 15 Gly Ser Pro Leu Thr Glu Gln Glu Glu Ser Ser Pro Ser His Asp
 1160 1165 1170
 20 Arg Ser Arg Thr Val Ser Ala Ser Ser Thr Gly Asp Leu Pro Lys
 1175 1180 1185
 Ala Lys Thr Arg Ala Ala Asp Leu Leu Val Asn Pro Leu Asp Pro
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 30 Ala Cys Trp Val His Lys His Phe Thr Glu Asp Ile Gln Thr Arg
 1220 1225 1230
 35 Gln Tyr Arg Ser Ile Glu Val Leu Ile Gly Ala Gly Tyr Ser Thr
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 1265 1270 1275
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 1280 1285 1290
 50 Ile Pro Arg His Phe Ala Leu Ser Gly Lys Tyr Ser Arg Glu Phe
 1295 1300 1305
 55 Phe Asn Arg Arg Gly Glu Leu Arg His Ile Thr Lys Leu Lys Pro
 1310 1315 1320
 60 Trp Ser Leu Phe Asp Val Leu Val Glu Lys Tyr Gly Trp Pro His
 1325 1330 1335

Glu Asp Ala Ala Gln Phe Thr Asp Phe Leu Ile Pro Met Leu Glu
1340 1345 1350

5

Met Val Pro Glu Lys Arg Ala Ser Ala Gly Glu Cys Arg His Pro
1355 1360 1365

10

Trp Leu Asn Ser
1370